



**Tiny battery-powered lasers  
developed by Bell Laboratories**

Bell Laboratories scientists have devised a new laser, smaller than a grain of sand, that can be powered by ordinary flashlight batteries. Such lasers may one day speed the transmission of voice, data, and other information signals in high capacity communications systems.

The new semiconductor device operates continuously at room temperature, which is about the average operating temperature of transmission equipment used in communications systems today. Earlier semiconductor lasers could operate at room temperature for only fractions of a second at a time. As a result, only a tiny portion of the laser's

message-carrying potential could be used.

With further development, the device may eventually be able to produce a single high-frequency light beam, capable of transmitting hundreds of thousands of telephone calls, television signals or data messages.

When the remaining technical problems are eliminated, the new-type laser should be no larger than a pen light or cigarette lighter, cost a few dollars at most, and be capable of providing a lifetime of service.

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